

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

A49CE  
Revision 5  
GROB Aircraft AG  
[GROB Aerospace GmbH i.l.]  
[GROB Aerospace GmbH]  
[GROB-WERKE]  
G120A  
June 4, 2015

**TYPE CERTIFICATE DATA SHEET NO. A49CE**

This Data Sheet which is a part of Type Certificate No. A49CE prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: GROB Aircraft AG  
Lettenbachstrasse 9  
86874 Tussenhausen-Mattsies  
Germany

Type Certificate Ownership Record: GROB-WERKE  
Burkhart Grob e.K.  
Unternehmensbereich Luft- und Raumfahrt  
Lettenbachstrasse 9  
86874 Tussenhausen-Mattsies  
Germany, transferred TC A49CE to GROB Aerospace GmbH on December, 2006

GROB Aerospace GmbH  
Lettenbachstrasse 9  
86874 Tussenhausen-Mattsies  
Germany, transferred TC A49CE to GROB Aerospace GmbH i.l.on August, 2008

GROB Aerospace GmbH i.l.  
Lettenbachstrasse 9  
86874 Tussenhausen-Mattsies  
Germany, transferred TC A49CE to GROB Aircraft AG February, 2009

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**I. Model GROB G120A (Utility and Aerobatic Category), approved January 29, 2002**

<u>Engine</u>	Textron Lycoming AEIO-540-D4D5	
<u>Fuel</u>	AVGAS 100 or 100 LL	
<u>Engine Limits</u>	Maximum power	260 hp (193.9 KW)
	Maximum permitted RPM	2700 RPM
	Maximum continuous power	260 hp (193.9 KW)
	Maximum continuous RPM	2700 RPM
<u>Propeller</u>	Hartzell HC-C3YR-4BF/FC7663R	
<u>Propeller Limits</u>	Maximum Diameter	78 in (1981 mm)
	Propeller RPM Limits	2700 RPM
<u>Airspeed Limits.</u>	V <sub>NE</sub> (never exceed)	235 kts (435 km/h)
	V <sub>NO</sub> (normal operating)	172 kts (318 km/h)
	V <sub>A</sub> (maneuvering)	
	utility aircraft	145 kts (268.5 km/h)
	acrobatic aircraft	165 kts (305 km/h)
	V <sub>FE1</sub> (flaps extended, takeoff)	150 kts (278 km/h)
	V <sub>FE</sub> (flaps extended Landing, Full)	114 kts (211 km/h)
<u>C.G. Range.</u>	Utility aircraft	106.2 in. (2698 mm) aft of datum
<u>Most Forward C.G.:</u>		at 3285 pounds (1490 kg)
		105.8 in. (2688 mm) aft of datum
		at 2976 pounds (1350 kg)
		106.0 in. (2691 mm) aft of datum
		at 2425 pounds (1100 kg)
<u>C.G. Range.</u>	Acrobatic aircraft	106.1 in. (2695 mm) aft of datum
<u>Most Forward C.G..</u>		at 3175 pounds (1440 kg)
<u>Continued:</u>		105.8 in. (2688 mm) aft of datum
		at 2976 pounds (1350 kg)
		106.0 in. (2691 mm) aft of datum
		at 2425 pounds (1100 kg)
<u>Most rearward C.G.:</u>	Utility aircraft	108.5 in. (2755 mm) aft of datum
		at 3285 pounds (1490 kg)
		108.9 in. (2767 mm) aft of datum
		at 2867 pounds (1300 kg)
		108.9 in. (2767 mm) aft of datum
		at 2425 pounds (1100 kg)
	Acrobatic aircraft	107.9 in. (2741 mm) aft of datum
		at 3175 pounds (1440 kg)
		108.3 in. (2750 mm) aft of datum
		at 2823 pounds (1280 kg)
		108.3 in. (2750 mm) aft of datum
		at 2425 pounds (1100 kg)

Straight-line variation between points

<u>Empty Weight C.G. Range</u>	See Flight Manual (weight and balance, Section 6)		
<u>Reference Datum</u>	QE 0 in. (0 mm), 91.9 in. (2335 mm) in front of wing leading edge at ME 43.3 in. (1150 mm).		
<u>Leveling Means</u>	Canopy sill.		
<u>Maximum Weight</u>	Utility aircraft	3285 pounds (1490 kg)	
	Acrobatic aircraft	3175 pounds (1440 kg)	
<u>Minimum Crew</u>	1 pilot.		
<u>Number of Seats</u>	2 (side by side) 113.0 in. (2870 mm) aft of datum.		
<u>Maximum Baggage</u>	110 pounds (50 kg) 150.8 in. (3830 mm) aft of datum.		
<u>Fuel Capacity</u>	69.2 U.S. gallons (262 liters) total, 105.3 in. (2675 mm) aft of datum 66.6 U.S. gallons usable (252 liters) (see AFM page 2-11.)		
<u>Oil Capacity</u>	12 quarts (11.4 liters) 42.7 in. (1085 mm) aft of datum		
<u>Control Surface Movements</u>		(inches) /	(mm)
Aileron	UP	2.99	± 0.16
	DOWN	3.19	± 0.16
Aileron servo	UP (aileron on stop)	1.14	± 0.08
	DOWN (aileron on stop)	1.14	± 0.08
Elevator	UP	3.82	± 0.20
	DOWN	4.25	± 0.20
Trim tab (elevator neutral)	UP	0.71	± 0.08
	DOWN	1.18	± 0.12
Rudder	LH	8.66	+0/ - 0.24
	RH	7.76	+0/ - 0.24
Flaps	UP	0	
	DOWN	12.20	+ 0/ - 0.35
<u>Serial Numbers Eligible</u>	G120A as of serial number 85001.		
<u>Import Requirements</u>	The FAA can issue a U.S. airworthiness certificate based on an NAA Export Certificate of Airworthiness (Export C of A) signed by a representative of the Luftfahrt Bundesamt on behalf of the European Community. The Export C of A should contain the following statement: 'The aircraft covered by this certificate has been examined, tested, and found to comply with U.S. airworthiness regulations 14 CFR Part 23 approved under U.S. Type Certificate No. A49CE and to be in a condition for safe operation.'		
<u>Certification Basis</u>	Type certification under 14 CFR Section 21.29 including the following requirements: - 14 CFR 23, effective February 1, 1965, including Amendments 23-1 through 23-54 - 14 CFR Section 36, effective November 18, 1969, including Amendments 36-1 through Amendment 36-22.		

Certification Basis, (cont'd)

## Equivalent Safety Items:

Equivalent levels of safety finding made per the provision of 14 CFR Part 21.21(b)(1) for:

ELOS ACE-02-05: FAR §23.865, Fire protection of flight controls, engine mounts, and other flight structure; Refer to FAA memorandum dated January 24, 2002.

ELOS ACE-02-04: FAR §23.1553 Fuel Quantity Indicator; Refer to FAA memorandum dated January 23, 2002.

Special Conditions: High Intensity Radiated Fields, (HIRF), Number 23-110-SC, dated January 29, 2002.

The Luftfahrt Bundesamt originally type certificated this aircraft under its type certificate Number 1121. The FAA validated this product under U.S. Type Certificate Number A49CE. Effective September 28, 2003, the European Aviation Safety Agency (EASA) began oversight of this product on behalf of Germany.

The EASA type certificate for the G120A models is EASA.A.075.

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the airplane for certification.

In addition, the following items of equipment are required:

Airplane Flight Manual GROB G 120A, Doc. No. 120.PO.002-E, issue 1, Revision 9, or approved revision.

Service Information

Each of the documents listed below must state that it is approved by the European Aviation Safety Agency (EASA) or – for approvals made before September 28, 2003 – by the Luftfahrt Bundesamt.

- Service bulletins,
- Structural repair manuals,
- Vendor manuals,
- Aircraft flight manuals, and
- Overhaul and maintenance manuals.

The FAA accepts such documents and considers them FAA-approved unless one of the following conditions exists:

- The documents change the limitations, performance, or procedures of the FAA approved manuals; or
- The documents make an acoustical or emissions changes to this product's U.S. type certificate as defined in 14 CFR § 21.93.

The FAA uses the post type validation procedures to approve these documents. The FAA may delegate on case-by-case to EASA to approve on behalf of the FAA for the U.S. type certificate. If this is the case it will be noted on the document.

Note 1. Current weight and balance data together with a list of equipment included in the certificated empty weight, and loading instructions, when necessary, must be provided for each powered aircraft at the time of original certification. The certificated empty weight and corresponding center of gravity locations must include the following:

- a) unusable fuel of 16.0 lbs (G 120A) at 105.3 in. (2675 mm) aft of datum
- b) engine oil of 11.18 lbs (G 120A) at 42.7 in. (1085 mm) aft of datum.

Note 2. The placards listed in Section 2 of the LBA-approved Airplane Flight Manual 120.PO.002-E must be displayed. See Note 9.

- Note 3. Service Life Limited components airframe:  
15,000 flight hours for G120A  
Every 3000 (for G120A) flight hours the “Significant Structural Items Inspection” must be performed. This may provide the necessary clearance for further flight.
- Note 4. Changing the color and the thickness of the coat is only permissible after prior approval by the manufacturer (refer to GROB process specification GPS 1078/1).
- Note 5. Major structural repairs must be accomplished at FAA certified repair stations rated for composite aircraft structure work, in accordance with GROB repair methods approved by FAA.
- Note 6. The G120A is approved for VFR day and night and IFR.

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